

Parents' Guide to Childhood Immunization

Measles

Measles is a viral illness that causes a rash all over the body. It also causes fever, runny nose and cough. About 1 out of 10 children with measles also get an ear infection, and up to 1 out of 20 get pneumonia. About 1 out of 1,000 get encephalitis, and 1 or 2 out of 1,000 die. While measles is almost gone from the United States, it still kills about half a million people a year around the world. Measles can also make a pregnant woman have a miscarriage or give birth prematurely. Measles spreads through the air by breathing, coughing or sneezing. It is so contagious that any child who is exposed to it and is not immune will probably get the disease. Before measles vaccine, nearly all children got measles by the time they were 15. Each year about 450 people died because of measles, 48,000 were hospitalized, 7,000 had seizures, and about 1,000 suffered permanent brain damage or deafness. Today there are only about 50 cases a year reported in the United States, and most of these originate outside the country.

MMR Vaccine

MMR combines vaccines for **Measles**, **Mumps** and **Rubella** into one shot. MMR has been around since 1971, although its three components were licensed separately during the 1960s. It is a live vaccine, containing measles, mumps and rubella viruses that have been “attenuated” (weakened), so they won’t cause disease. Most children who get the vaccine develop immunity to all three diseases (over 99% for measles and 95% for mumps and rubella). Protection is believed to be life-long. Two doses of vaccine are recommended, with the first dose given at 12–15 months of age. The second dose may be given 4 weeks after the first, but it is usually given at 4–6 years. Measles, mumps and rubella vaccines may be given separately, although these individual vaccines are not always readily available. Doctors usually prefer not to give the vaccines this way because it means giving a child 3 shots instead of one.

MMR Vaccine Side Effects

Some children (about 1 in 5) get a mild rash or fever after MMR vaccine. These reactions begin a week or two after the vaccination and usually last for 1–3 days. About 1 child in 7 may get swollen lymph glands, and 1 child in 100 may have pain or stiffness in the joints that can last from a few days to a few weeks. There is a smaller risk of painful **swelling of the joints** (arthritis). These joint symptoms occur more often in adults, especially women. **Febrile seizures** (seizures caused by a fever) have occasionally been reported after MMR vaccination. These usually happen 1 or 2 weeks after the shot and are caused by the fever than can accompany the vaccination rather than by the vaccine itself. Children recover from febrile seizures quickly and they do not cause permanent harm.

There have been reports of children getting **encephalitis** (inflammation of the brain) after an MMR shot. This happens so rarely — less than once in a million shots — that experts can’t be sure whether the vaccine is the cause or not. Remember, though, that if the same million children were infected with measles, about 1,000 of them would get encephalitis.

MMR Vaccine Precautions

In addition to the normal precautions for all vaccines, shown on page 30, children who are known to have a **severe allergy to gelatin** or the antibiotic **neomycin** should not get MMR. A child who has a **suppressed immune system**, either because of a disease such as cancer or HIV infection or a medication such as steroids, should be evaluated by a doctor before getting MMR. A child who has recently gotten a **transfusion or**

other blood product might have to wait up to several months before getting MMR. Two live vaccines (for example, MMR and varicella) may be given on the same day or separated by at least 4 weeks. But they should not be given less than 4 weeks apart, because they might interfere with each other. MMR and inactivated (killed) vaccines may be given together, or at any time in relation to each other. Children who have gotten MMR vaccine cannot infect people they come in contact with.

Combination Vaccines

Several vaccines are sometimes combined into a single shot. These are called combination vaccines. Some combination vaccines are used routinely - DTaP is a combination; so is MMR. There are currently four other combination vaccines available for children. One combines DTaP and Hib vaccines; the second Hib and hepatitis B; the third combines DTaP, hepatitis B, and polio, and the fourth combines measles, mumps, rubella and varicella. The advantage of combination vaccines is, of course, that your children get the protection of all the component vaccines while getting fewer injections. Each of these vaccines has certain restrictions, and not all providers carry them. But ask your provider about them if you are interested in reducing the number of shots your child needs.